



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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April 18, 2007

Mr. Thomas Macchiarella, Code 06CA.TM
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

RE: Draft Record of Decision for Site 25 Soil, Alameda Point

Dear Mr. Macchiarella:

EPA has reviewed the above referenced document, submitted by the Navy on December 20, 2007. The regulatory agencies requested a 30-day extension to the review period and EPA submitted draft comments on the document via electronic mail on March 27, 2007. Based on discussions with DTSC since then, EPA is now submitting final comments on the ROD with some revisions to the requested IC language contained in the draft comments sent in March. We appreciate the Navy accommodating our delay in sending out the final comments.

The remedy for Site 25 consists entirely of Institutional Controls (ICs). It is an unusual ROD in that waste is being left in place, under the buildings and hardscape, with a high probability that it will later be disturbed. Thus, the term "two stage remedy" has come to be informally used in addressing the remedy for this site. EPA is requesting some substantive changes to the IC language contained in the ROD to ensure that if the ICs are removed in the future, the soil under the buildings and hardscape areas will be remediated to a health protective level. We are requesting, within the ROD, that specific conditions be met should the removal of the ICs occur in order to avoid having to ask the DOD for a ROD amendment or ESD.

Since we have asked for fairly significant changes to the IC wording, we have not submitted this draft ROD to our EPA HQ for the required review of the LUC components. We will therefore need to factor in the extra time required for a HQ review during, or possibly preceding, the review of the draft final document.

We are looking forward to working together to resolve the complex IC issues posed by this ROD. Please call me at (415) 972-3029 to discuss the enclosed comments further.

Sincerely,

A handwritten signature in cursive script, reading "Anna-Marie Cook".

Anna-Marie Cook
Remedial Project Manager

enclosure

cc list: Mary Parker, Navy
Dot Lofstrom, DTSC
Erich Simon, Water Board
Peter Russell, Russell Resources, Inc
George Humphreys, RAB Co-Chair
Suzette Leith, EPA
John Chesnutt, EPA

**EPA Review of the Draft Record of Decision
for Site 25 Soil, Alameda Point**

1. **Abbreviations and Acronyms:** The term “mg/kg” is listed twice.
2. **Page D-1, fourth paragraph:** Replace the word “review” with the word “evaluation”.
3. **Page D-2, first paragraph, second sentence:** Remove the word “greatest” from this sentence.
4. **Page D-3, second bullet principle threat waste** is inconsistent with Sec. 11.0, which says there is no principal threat waste, and with the second bullet on page 13-7. This waste is not a principal threat.
5. **Page D-3, last sentence:** Insert the word “every” before the phrase “five years after initiation of the remedy...”
6. **Page D-5:** The word “Facilities” has been misspelled under Ms. Johnson’s title and a “Mr.” should be inserted before “Bruce H. Wolfe”.
7. **Page 1-1, second sentence:** Please note that OU 5 and Site 25 are completely separate at this time. OU 5 deals exclusively with groundwater contamination and covers an area far larger than Site 25, although a portion of Site 25 overlies the groundwater contamination. Site 25 deals exclusively with soil contamination in Parcels 181, 182 and 183. Please rewrite this sentence to read: “Site 25 is east of Main Street with access provided by Singleton Avenue on Alameda Point in Alameda, California.
8. **Page 2-1, Section 2.1, second paragraph:** The discussion of the Marsh Crust is confusing here and the origins of the sediment used for filling in Site 25 are not described. Although it seems that the writers are trying to make a distinction between the Marsh Crust PAH containing layer and the PAHs found in the soil at Site 25, the description needs more clarity.
9. **Page 2-3, Section 2.2.1, second paragraph:** SVOCs were also analyzed.
10. **Page 2-4, Section 2.2.3:** The EBS data flagged the high hit of PAHs in the northernmost portion of Parcel 182, and it was this sample result that spurred the subsequent investigation into the possible widespread PAH contamination in this parcel and neighboring parcels 181 and 183. Last sentence in this section needs to be expanded to give the reason that additional soil and groundwater sampling was recommended.

11. **Page 2-6:** For completeness, it would be helpful to mention that there are no TPH related activities at this site.
12. **Page 3-1, Section 3.1, second paragraph, first sentence:** Revise to read “The RAB currently consists of members of the DON...”
13. **Page 3-2, Section 3.2, third sentence:** Include the phrase “removal activities” between the terms “environmental investigations” and “the upcoming remedy selection process”.
14. **Table 3-1:** Please include on this table all mailings related to the PAH removal actions at Clover Park, the Housing Area and the neighboring school sites. Fact sheets were distributed, public notices published, public meeting notifications announced and a bulletin was provided for the School District regarding these removal actions.
15. **Page 4-1, first sentence:** Please delete the phrase “which are addressed together as Site 25” from this sentence. It is not grammatically correct and is also unnecessary given the statement in the sentence following this one.
16. **Page 5-1, Section 5.1, third paragraph, third sentence:** Please delete this sentence. Industrial waste discharges trapped in the sediment which was used for artificial fill may have contributed to the PAH contamination, but industrial waste itself has never been used as a source of fill material.
17. **Page 5-4, Section 5.3.1, fifth sentence:** Suggest rewriting to sound less awkward. “Although a vertical concentration profile which decreases with depth and a horizontal pattern that decreases in concentration away from a release point would be expected, the B(a)P-equivalent concentrations at Site 25 increase with depth and are generally distributed throughout the site.” Remove the word “preliminary” from the subsequent sentence since we are at the ROD stage now.
18. **Page 5-4, last sentence:** Please delete the word “immediate” from this sentence. There are no unacceptable risks to current residents from the surface to 4 feet bgs and that is why no action is being taken in this soil horizon.
19. **Page 5-5, Section 5.3.2, first sentence:** Revise to read “Based on statistical analyses performed from site assessment data, the detected metals concentrations are consistent with background levels and are therefore believed to be naturally occurring (CDM, 2005).”
20. **Page 5-5, Section 5.3.2, second paragraph:** What does it mean that the cyanide was found at slightly above the reporting limit? Please give the sample concentration and the residential PRG and then a justification as to why it is not considered a COPC.

21. **Section 5.4:** As written, Section 5.4 is extremely confusing and does not lend support to the conceptual model we have been working with for the past five years. Recommend replacing Section 5.4 with the following text:

5.4 CONCEPTUAL SITE MODEL

Several historical industrial operations were located in the vicinity of present-day Alameda Point. During the late 1800s and up until the 1920s, two manufactured gas plants and an oil refinery (Pacific Coast Oil Works), an asphalt pipe manufacturing plant, a soap company, and a carriage company were located near what is now Site 25. These facilities probably discharged petroleum products and other wastes which were deposited in the surrounding tidal channels and marshes under what is now Alameda Point. The petroleum wastes trapped in the tidal channels and marshes formed a layer over which artificial fill material was later placed to form Alameda Point. This trapped layer is referred to as the Marsh Crust, varies from a few inches to a foot in thickness, and is found between five and fifteen feet below ground surface beneath approximately half of Alameda Point.

In addition to depositing wastes in the tidal channels and marshlands, the petroleum wastes and other wastes are believed to have been deposited onto the sediments in Oakland Inner Harbor and the surrounding San Francisco Bay. When dredge and fill events began in the late 1800s it is thought that the petroleum contaminated sediments from the Oakland Inner Harbor and the surrounding Bay were used to fill in what is now Site 25 and the adjacent areas. The sediment dredged up first was the most contaminated and, according to maps depicting the fill history of Alameda Point, was placed in the northern portion of Site 25. As fill operations continued, deeper and deeper dredging occurred to acquire the fill material, and the deeper sediment contained little to no contamination. Thus, as Alameda Point was progressively filled using the deeper dredged sediment, the fill material contained less and less PAHs. This trend is clearly depicted when PAH concentrations in the artificial fill areas are tracked over the extent of Alameda Point. It is also apparent that the area of Site 25 filled first contains the highest concentrations of PAHs and that the concentrations lessen with later filling events. Thus, the concentrations of PAHs within Site 25 decrease from north to south-southeast and decrease from depth to surface.

22. **Figure 5-1:** Please include a list of all chemicals detected in soil such as Figure 5-1 in the Site 26 ROD. Also, Figure 5-1 is confusing. The notes indicate that after the remedy is implemented, exposure via the dotted line will be eliminated. Should this instead read “the solid line”? The dotted line applies to surface soil up to 4 feet bgs. Isn’t the Navy’s position that the possibility of exposure in this area has already been eliminated? Also, the second arrow, that “exposure to subsurface soil below remedial action depth may be viable pathway after implementation” is quite confusing. Isn’t the point the opposite, that the action is intended to eliminate this potential exposure?

23. **Page 6-1, Section 6.1:** Site 25 doesn't "overlie" PAH-contaminated soil. Site 25 *is* the IR site comprised of the PAH contaminated soil in Parcels 181, 182 and 183, and if there were no contamination Site 25 would not have been created.
24. **Section 7.1:** Please define and explain how B(a)P-eq is used. Also, please clarify the sentence "...however, the cumulative exposures from soil, groundwater, and soil gas were incorporated into the risk evaluation."
25. **Section 7.1.1, second paragraph:** Please delete this paragraph.
26. **Section 7.1.3, page 7-4, first paragraph, last sentence,** beginning with "Reference doses". Move this last sentence to become the first sentence of the next paragraph.
27. **Section 7.1.3, page 7-4, first sentence in last paragraph of section:** Replace "R1" with "RI".
28. **Section 7.1.4.2, first and second sentence:** It seems that there needs to be a period after the phrase "to occur for a long period of exposure" and that a new sentence should start with "Average daily doses (ADDs) and RfDs are compared..."
29. **Section 7.1.4.2, last sentence:** The sum of the hazard quotients is known as the *Hazard Index*, and the acronym commonly used is *HI*.
30. **Section 7.3, first paragraph, fourth sentence:** The word "within" should be "when".
31. **Section 7.3.1.5, first paragraph, last sentence:** Are the ICs for the OU 5 ROD being referred to here? If so then that should be clearly stated, otherwise no support is given for the statement that residents will not have contact with the groundwater.
32. **Section 7.3.3.2, second paragraph:** These paragraphs are confusing and it is unclear what purpose is being served by having them here. Italics and italicized comments will serve to emphasize which areas are problematic. What does it mean "...only very few PAHs are dissolved *in water in the soil* environment?" Are you discussing leaching of PAHs from soil to groundwater? The sentence "The PAHs of concern (*which PAHs, since the immediate previous reference was to the PAHs in groundwater?*) are not mobile and will not migrate upward to impact clean soil (*are you talking about PAHs in soil migrating upward, which is not physically probable, or are you referring to naphthalene coming up by means of a rising water table to impact soil?*) or into groundwater." The sentence "Any upward migration would only occur for dissolved chemicals..." is unclear. What chemicals are you concerned about here? Are they in groundwater and you are

concerned they are migrating up into soil through a rising water table? Why is this concern a particular problem for this site and not others? Are you concerned that the chemicals are migrating up through the dry soil horizon in the form of soil gas (which hasn't been addressed)? Please rewrite or delete this section. It might be sufficient to state that the PAHs of concern are the higher molecular weight compounds which have a tendency to absorb strongly to soil particles and that also characteristically have low volatility and low mobility.

33. **Section 9.0, second paragraph, third sentence:** "...to incur significantly greater costs..." than what? Please state the costs for the other alternatives.
34. **Section 9.0, second paragraph, fourth sentence:** The word "prohibitive" is usually used in the context of cost. Here it seems that the words "impracticable" or "formidable" would be more appropriate.
35. **Section 9.3:** Move the third paragraph to after the second sentence in the first paragraph for greater clarity.
36. **Section 10.1, second paragraph, last sentence:** Add in that ICs will be implemented prohibiting the removal of hardscape or major site work without an enforceable agreement with EPA and DTSC.
37. **Section 10.1, third paragraph:** Add that the same ICs as those in Alternative 2 will be implemented.
38. **Sec. 10.4 (page 10-2).** Add "through Treatment" to the title. Additionally, in the second sentence, it appears that this should read: "However, the clean backfill imported during the TCRA acts as a barrier...."
39. **Table 10-2, Alt. 2 (ICs), under Implementability,** states that negotiations would be required between the DON and DTSC to develop the final nature of the ICs. This suggests that the final IC remedy is not being chosen in this ROD, which cannot be the case. We assume the intent is that DON and DTSC will determine the exact vehicle for the ICs if the property is transferred, e.g. a LUC under State law. This should be clarified. Same concern for Alt. 3 on the next page.
40. **Table 10-1, Alt. 3, Reduction in Toxicity.** Should say that implementation of ICs *and excavation* does not result....
41. **Sec. 10.10, p. 10-4, Conclusion.** Why is concurrence by the State of California specifically called out? Also, we object to selecting a remedy based on a "rating," and reference to "scoring," all of which imply a numerical comparison, as opposed to an evaluation of all the relevant criteria, as is required by the NCP.

42. **Sec. 12.0, Selected Remedy, p. 12-1.** References in the first two paragraphs to the DON selecting the remedy should also include EPA as a co-selector of the remedy.
43. **Section 12.0, last paragraph, first sentence:** Submittal of annual reports should also be included in the remediation costs for Alternative 2.
44. **Section 12.1, first sentence:** Delete the second “used” in this sentence.
45. **Section 12.1, last paragraph:** Suggest moving this paragraph and making it the first paragraph under Section 12.1.1.
46. **Section 12.1.3, page 12-2, second bullet:** There are two periods at the end of the first sentence.
47. **Section 12.1.3, page 12-3, third paragraph, first sentence:** Replace “monitoring” with the word “maintenance”.
48. **Page 12-4, first paragraph, first sentence:** Replace the word “monitoring” with “and maintaining”.
49. **Section 13.1, first sentence:** Insert “to four feet below ground surface” between “in soil” and “at Site 25”. Also, in the second sentence, it is not clear what “non-hardscape areas” covers. Where do existing buildings fit in? Are they considered “hardscape”? Typically hardscape refers to sidewalks, roadways and parking lots.
50. **ARARs, p. 13-4:** It is not clear why the Migratory Bird Treaty is an ARAR for an IC-only remedy.
51. **Sec. 13.4, page 13-7, Use of Permanent Solutions, etc.** Need to expand this section and discuss why this ROD meets this criterion.

Additional Comments on Institutional Controls:

The ROD should specify the following regarding the enforceable agreement that will be needed for major site work or building removal:

1. The sentences stating that EPA and DTSC will require an enforceable agreement should include the following: “EPA and DTSC will require an enforceable agreement that will include both agencies, unless either agency in its discretion decides that its participation is not necessary. In that case, the enforceable agreement would only be with the other regulatory agency.”
2. The enforceable agreement will require any remediation activities to be consistent with CERCLA and with EPA regulations, and will require any

activities to meet applicable or relevant and appropriate requirements as defined for CERCLA cleanups. The enforceable agreement will provide that the final remedy will be selected by EPA, in consultation with DTSC and the DON, and that in any disputes, EPA is the final decision-maker.

3. The enforceable agreement will require that when the major site work or building demolition is completed, there be four feet of soil from the surface down in which no single PAH concentration exceeds 1.0 mg/kg and the average site concentration does not exceed 0.62 mg/kg.
4. The ROD only indicates that the ICs apply to a future owner, not the current owner. While the property is still owned by the Navy, the ICs need to apply to the Navy. The ROD should indicate that if the Navy undertakes demolition of the buildings or major site work, such work needs to be done consistently with requirements for the enforceable agreement discussed in this ROD and pursuant to remedial design documents as specified in the FFA.
5. The discussion of major site work should indicate that the decision as to what constitutes major site work is within the discretion of EPA in consultation with the DON and DTSC.
6. As written, it is not clear who must approve the SMP. The ROD should state that DON and DTSC must approve specific SMPs, and EPA must also approve specific SMPs unless EPA, in its discretion, determines that its review and approval of a specific SMP is not necessary.

Appendix A Comments:

1. **Page 12 of 42, Record Date 03-20-2001:** This should be the Remedial Investigation Workplan rather than the Remedial Action Workplan
2. **Page 26 of 42, Record Date 08-23-2002:** Why is an Action Memo for Sites 9 and 16 included in this Administrative Index?

Appendix D Comments:

1. **Response to Comment #3 from Mr. Patrick Lynch, second paragraph, second and third sentences:** For clarity, suggest rewording: "The PAHs in the fill likely originated from the coal or oil gasification plants since PAHs are coal and oil gasification wastes.
2. **Response to Specific Comment #3 from Mr. George Humphreys:** The response did not address the last sentence of Mr. Humphreys comments, namely the remediation goals for the plume. The RGs used for OU 5 achieve the one in a

million cancer risk that he is concerned may not be met. Please expand the response to address the entire comment.